# GLOSSARY OF TECHNICAL TERMS

*This glossary contains explanations of certain terms and definitions used in this document in connection with us and our business. The terms and their meanings may not correspond to standard industry meaning or usage of those terms.*

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| "BIPV" | Building Integrated Photovoltaics |
| "cropping saws" | the equipment to cut ingots before they are squared and sliced into wafers |
| "CZ" | Czochralski, a growth method of which an important application is the growth of large cylindrical ingots of single crystal silicon |
| "GW" | gigawatt, which equals $10^9$ Watt |
| "hot zone" | a graphite thermal isolation structure into which a crucible is placed to preserve heat during ingot pulling production |
| "g" | gram |
| "ingot" | cylindrical silicon brick, which is created when polysilicon is melted, crystallised and pulled in a furnace, and to be sliced into wafers |
| "ingot pullers" | the equipment used for ingot production to pull molten polysilicon from a crucible in a rotating upward motion in a vacuum chamber |
| "kerf loss" | the amount of material loss during the cutting process, a measure of a wafer manufacturer's production efficiency, which is calculated by dividing (a) the difference between the weight of the raw materials used in the cutting process and the weight of the wafers produced, by (b) the weight of the raw materials used in the cutting process |
| "kg" | kilogram |
| "kilowatt hour" | a unit of energy which refers to the specific amount of energy provided in a 3,600-second time period |
| "km" | kilometre |
| "KW" | Kilowatt, which equals $10^3$ Watt |
| "module" | Interconnected solar cells encapsulated and protected in transparent materials that protect against humidity, air and mechanical damage, which are normally made with a glass front and aluminum frame |

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| "monocrystalline silicon" | processed silicon where all the material consists of a single crystal structure |
| "mm" | millimetre |
| "MW" | megawatt, which equals $10^6$ Watt |
| "multicrystalline silicon" | processed silicon where the material consists of several small (typically 1-20 mm) crystal grains |
| "N-type" | silicon's conductivity type, either P or N |
| "photovoltaic" or "PV" | the field of technology and research related to the application of solar cells for energy by converting solar energy (sunlight, including ultra violet radiation) directly into electricity (solar electricity) |
| "production yield" | a measure of a wafer manufacturer's production efficiency, which equals to the weight of wafers produced divided by the weight of the raw materials used in the production of such wafers |
| "P-type" | silicon's conductivity type, either P or N |
| "solar cell" | a device manufactured from silicon wafers which converts light energy into electrical energy |
| "squaring machine" or "squarer" | the equipment used in the wafering process to cut cropped ingots into blocks to be sliced into wafers |
| "TW" | terawatt, which equals $10^{12}$ Watt |
| "wafer" | a thin disk made by slicing ingots and used to manufacture solar cells |
| "Watt" or "Wp" | a unit of power equal to 1 joule per second |
| "wire saws" | equipment with a matrix of wires to simultaneously cut a square ingot into thin wafers |
| "μm" | micrometre |

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## ASSUMPTIONS ABOUT CONVERSION EFFICIENCY, AND PRODUCTION CAPACITY AND OUTPUT

We measure our wafer production capacity and output in MW, representing 1,000,000 Watts, a unit of power-generating capacity. For the purposes of this document, we have assumed an average solar power conversion efficiency rate of 17% for cells using our monocrystalline solar wafers. The conversion efficiency rate of a solar cell is the percentage of light energy from the sun that such cell or module converts into electrical energy. This conversion efficiency rate is estimated based on feedback we received in 2009 from our top 10 cell-manufacturing customers for the year ended 31 December 2008, which in aggregate accounted for approximately 85% of our total revenue in 2008. There were no material differences in the conversion efficiency rates as reported by our top 10 cell-manufacturing customers during the Track Record Period. The reported conversion efficiency rate ranges from 17.0% to 18.0%. Based on this conversion efficiency rate, we have assumed that each 125 mm by 125 mm solar wafer we produce generates approximately 2.53 Watts of power and each 156 mm by 156 mm wafer we produce generates approximately 4.06 Watts of power. We also measure our ingot production capacity and output in MW. Each kg of an ingot is assumed to yield a number of solar wafers that our current manufacturing processes generally yield. We calculated our production capacity, as at 31 December 2006, 2007 and 2008 and 30 June 2009 based on the wafer slicing capacity of our equipment in operation as at such dates, on an annualised basis. We calculated our planned production capacity of 200 MW by the end of November 2009 and 504 MW by the end of June 2010 based on the wafer slicing capacity of our equipment planned to be in operation by 31 December 2009 and 31 December 2010, respectively, on an annualised basis.

The production capacity of our Group as a whole as referred to in this document represents the lower of the production capacity for ingots and the production capacity for wafers. We adopted this approach as an ingot is an intermediate product in the production process of wafers, and when wafer production as a whole, which includes both the ingot production process and the wafering process, is considered, the production capacity for wafers, our Group's primary product, is limited by the production capacity of either product.

## REFERENCES TO MARKET PRICES OF POLYSILICON OR SOLAR WAFERS

In this document, unless otherwise stated or required by the context , the phrase "market price" refers to the market price of polysilicon or solar wafers as for the period or at the date reported in the industry reports published by Solarbuzz or PHOTON Consulting for the period or at the dates in respect of which such reference is made. Where such market price referred to in this document is expressed in a currency other than the originally reported currency, such market price was translated using the relevant exchange rate set out in the section headed "Definitions" in this document and is for illustrative purposes only.